

CLAIMS

What is claimed is:

1. A reduced calorie fat composition, which comprises:

| | | |
|----|------------|------------|
| 5 | Fatty Acid | wt% |
| | Palmitic | about 4.9 |
| | Stearic | about 4.8 |
| | Oleic | about 17.1 |
| | Linoleic | about 35.2 |
| 10 | Arachidic | about 1.7 |
| | Behenic | about 34.7 |
| | Lignoceric | about 1.6 |

2. The reduced calorie fat composition of claim 1, comprising the following solid fat index:

| | | |
|----|-------------|------|
| 15 | Temperature | SFI |
| | 15°C | 11.5 |
| | 20°C | 9.9 |
| | 25°C | 9.4 |
| | 30°C | 8.2 |
| 20 | 35°C | 3.4 |
| | 40°C | 0 |

3. The reduced calorie fat composition of claim 1, comprising the following physical properties:

| | | |
|----|----------------------|------------|
| 25 | Saponification Value | 179.8 |
| | Iodine Value | 75.9 |
| | Acid Value | <0.1 |
| | Melting Point | about 37°C |

4. The reduced calorie fat composition of claim 1, comprising the following triglyceride residues, as analyzed by HPLC:

| | Effective Carbon Number | Expected TAG(s) | wt% |
|----|-------------------------|-----------------|------|
| 5 | C 42 | LLL | 12.1 |
| | C 44 | LLO | 10.8 |
| | C 44 | LLP | 2.8 |
| | C 46 | SLL; POL | 3 |
| | C 46 | LOO | 2.4 |
| 10 | C 48 | SOL; OOO | 2.6 |
| | C 50 | BLL | 32.3 |
| | C 52 | BLO | 12.2 |
| | C 52 | BLP | 2.4 |
| | C 54 | BOO | 1.9 |
| 15 | C 54 | BOP | 2.1 |
| | C 56 | BOS | 1.7 |
| | C 58 | BLB | 11.4 |
| | C 60 | BOB | 2.1, |

where B represents a behenic acid residue, P represents a palmitic acid residue, L represents a linoleic acid residue, O represents an oleic acid residue, and S represents a stearic acid residue.

5. A reduced calorie fat composition, which comprises palmitic acid, stearic acid, linoleic acid, arachidic acid, behenic acid, lignoceric acid, and residues thereof.

6. The reduced calorie fat composition of claim 5, which consists essentially of palmitic acid, stearic acid, linoleic acid, arachidic acid, behenic acid, lignoceric acid, and residues thereof.

7. The reduced calorie fat composition of claim 5, wherein the behenic acid and its residue are present in an amount from about 29.8% to about 52.5% by weight of the composition.

8. The reduced calorie fat composition of claim 5, wherein the behenic acid and its residue are present in an amount from about 5% to about 41% by weight of the composition.
- 5 9. The reduced calorie fat composition of claim 5, wherein the linoleic acid and its residue are present in an amount from about 24.8% to about 44.6% by weight of the composition.
- 10 10. The reduced calorie fat composition of claim 5, wherein the linoleic acid and its residue are present in an amount from about 33% to about 60% by weight of the composition.
- 10 11. A reduced calorie fat that is made by a process comprising:
- esterifying one or more edible oils with 1,3-dibehenin in the presence of a thermostable lipase enzyme at a temperature in the range of about 25°C to 150°C for at least about 0.5 hours; and
- recovering the reduced calorie fat,
- 15 wherein the thermostable lipase enzyme is LIPOZYME.